

Notice of Allowability

Application No.

10/616,327

Applicant(s)

SUNAGA, TOSHIHIRO

Examiner

Houshang Safaipoor

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on 11/0/07.
2. ☒ The allowed claim(s) is/are 1, 2, 4-9 and 11-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 11/03, 01/04, 06/05, 11/05.

DETAILED ACTION

Reasons for Allowance

Claims 3 and 10 are canceled.

Claims 1, 2, 4-9 and 11-14 are allowed.

This is examiner's statement of reasons for allowance.

Claims 1, 2, 5-9 and 12-14 are allowed over the prior art of record because the prior art does not disclose an imaging optical system comprising "...wherein an optical path of a light beam passing through a center of the diaphragm and a center of an image obtained through the imaging is deflected by the off-axial reflection surfaces within a surface perpendicular to the long side direction of the region to undergo crossing at least once wherein all of the off-axial reflection surfaces satisfy a conditional expression:

$|P|S \geq 0.5$

where P (mm^{-1}) represents an optical power of the off-axial reflection surface within the surface perpendicular to the long side direction and S (mm) represents a distance from the off-axial reflection surface to a subsequent one of the off-axial reflection surfaces along a reference axis."

Claims 4 and 11 are allowed over the prior art of record because the prior art does not disclose an imaging optical system comprising “a first set of a plurality of off-axial reflection surfaces arranged on an object surface side from the diaphragm; and a second set of a plurality of off-axial reflection surfaces arranged on an image surface side from the diaphragm, wherein an optical path of a light beam passing through a center of said diaphragm and a center of an image obtained through the imaging is deflected by said off-axial reflection surfaces within a surface perpendicular to said long side direction of said object region to undergo crossing at least once, and, wherein the number (X) of off-axial reflection surfaces included in the first set of the plurality of off-axial reflection surfaces and the number (Y) of off-axial reflection surfaces included in the second set of the plurality of off-axial reflection surfaces satisfy a relation: $0.65 < X/Y < 1.6$.”

The features identified, in combination with other claim limitations, are neither suggested nor discussed by the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Houshang Safaipoor whose telephone number is (571)272-7412. The examiner can normally be reached on Mon.-Fri. from 6:00am to 2:30pm.

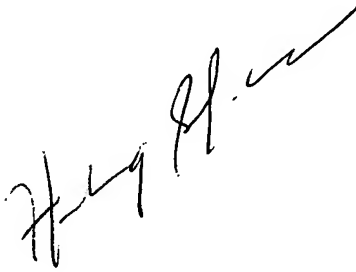
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Houshang Safaipoor
Patent Examiner
Art Unit 2625
November 24, 2007

A handwritten signature in black ink, appearing to read 'H. Safaipoor', is written diagonally across the page.